

CLAIMS

1. Implantable structure of flexible consistency for the sustained and controlled release of an active substance, consisting of a bioresorbable support and
5 an active substance, in which the active substance is intimately associated with the support, and in which the bioresorbable support is formed of a mixture of a lactic acid/glycolic acid copolymer and about 0.5 to 20% by weight, preferably about 5 to 15% by weight, based on the weight of the support, of a biocompatible plasticizer selected from lactic acid, a lactic acid oligomer and a mixture of these compounds,
10 said mixture of copolymer and plasticizer having a Tg below or equal to 15°C.
2. Implantable structure according to claim 1 in which the lactic acid/glycolic acid copolymer has a weight ratio between the lactic acid and glycolic acid units ranging from about 80/20 to 20/80, preferably ranging from about 70/30 to 30/70
15 and particularly preferably of 50/50.
3. Implantable structure according to claim 1 or 2 in which the active substance is selected from local anesthetics, morphine or non-morphine analgesics, healing factors, anti-inflammatories, antibiotics, antifungals, corticoids, hormones,
20 antimitotics, growth factors and a mixture of these active substances.
4. Implantable structure according to claim 3 in which the active substance is a local anesthetic.
- 25 5. Implantable structure according to one of claims 1 to 4 which is in the form of a yarn, film, hank, ribbon, sliver, woven or non-woven fabric, plate, catheter, tablet, sheet or suture thread.
6. Implantable structure according to one of claims 1 to 4 which is in the form
30 of a sandwich structure.
7. Process for the manufacture of an implantable structure for the sustained and controlled release of an active substance, consisting of a bioresorbable support and an active substance, in which the active substance is intimately associated with

the support, and in which the bioresorbable support is formed of a material which comprises an aliphatic polyester of therapeutic value as the main component and has a Tg below or equal to 15°C, said process comprising the following steps:

- a) mixing of the component products of the structure,
- 5 b) passage of some or all of the resulting mixture through the liquid and/or viscous state, with or without applied pressure, in a transfer chamber, and
- c) shaping of the implantable structure under pressure from this intermediate state.

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8. Process according to claim 7 which also comprises d) a heat treatment step.

9. Process according to claim 7 or 8 in which step b) is effected at a temperature between the melting point of the active substance and the glass transition temperature or melting point of the aliphatic polyester of therapeutic value.

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10. Process according to claim 7 or 8 in which step b) is effected at a temperature that is above both the melting point of the active substance and the glass transition temperature or melting point of the aliphatic polyester of therapeutic value.

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11. Process according to one of claims 7 to 10 which is a process of compression – transfer molding, injection – transfer molding, or extrusion or spinning with a preliminary transfer step.

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12. Process according to one of claims 7 to 11 in which the mixture of products obtained in step a) is ground to give a particle size ranging from about 5 to 150 µm, preferably from about 10 to 50 µm.

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13. Process according to one of claims 7 to 12 in which the aliphatic polyester of therapeutic value is selected from poly(α-hydroxy acids) derived from lactic acid and/or glycolic acid, poly(ε-caprolactone) and mixtures of these compounds.

14. Process according to claim 13 in which the bioresorbable support is formed of a mixture of a lactic acid/glycolic acid copolymer and about 0.5 to 20% by weight, preferably about 5 to 15% by weight, based on the weight of the support, of a biocompatible plasticizer.
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15. Process according to claim 14 in which the lactic acid/glycolic acid copolymer has a weight ratio between the lactic acid and glycolic acid units ranging from about 80/20 to 20/80, preferably ranging from about 70/30 to 30/70 and particularly preferably of 50/50.
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16. Process according to claim 14 or 15 in which the biocompatible plasticizer is selected from lactic acid, a lactic acid oligomer and a mixture of these compounds.
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17. Process according to claim 13 in which the bioresorbable support is formed of a mixture of poly(ϵ -caprolactone) and a water-soluble material in an amount which can range up to 20% by weight, preferably from 2 to 10% by weight, based on the weight of the support.
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18. Process according to one of claims 7 to 17 in which the active substance is selected from local anesthetics, morphine or non-morphine analgesics, healing factors, anti-inflammatories, antibiotics, antifungals, corticoids, hormones, anti-mitotics, growth factors and a mixture of these active substances.
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19. Process according to claim 18 in which the active substance is a local anesthetic.